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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,736	07/21/2003	Masahiro Okuda	Q76592	2795

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EXAMINER	
HANLEY, SUSAN MARIE	

ART UNIT	PAPER NUMBER
1651	

DATE MAILED: 03/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/622,736	OKUDA, MASAHIRO	
	Examiner	Art Unit	
	Susan Hanley	1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☒ Claim(s) *2, 5, 8, 9, 10, 12, and 13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4 sheets*. 10/4/05; 6/23/05; 12/23/03; 10/20/03
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-20 are presented for examination.

Claim Objections

Claims 2, 5, 8, 9, 10, 12, and 13 are objected to because of the following informalities: The units for concentration include a Greek letter. The letter should be adjacent to the metric unit that it modifies. For example, μ g/mL should appear as μg/mL. In claim 2, at the last line of the claim, "μg/m" should read as "μg/mL". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 6-14, 19 and 20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Brown (US 5,314,695) in light of Webster's Dictionary.

Brown discloses liposome compositions phospholipids including phosphoserine and tissue factor. The tissue factor can be inserted into the bilayer that is formed by the phospholipids in a solution (col. 4, lines 25-36). In addition to PS, the phospholipids comprise PE, PC and PG. The PL can come from purified natural sources or can be synthetic (col. 4, lines 58-68). The liposome solution can further comprise $CaCl_2$ (col. 7, lines 51-59). Brown discloses liposomes having different ratios of PS, PE, PG and PC. In Table I, col. 10, the ratio of phospholipids is 1:1:1:0 (PC:PE:PS:PG). The ratio of PL for entries 10 and 11 are 10:0:1:0 and 20:1:1:0, respectively. Entries 10 and 11 represent a 10 and 20-fold dilution of PS compared to the ratio of PL in the first entry. Thus, this disclosure meets the limitations of instant claim 1 because compositions having different concentrations of PS in a compostion of PL are disclosed. The

limitation of claim 3 is met because the concentration of PS in the PL composition of the first entry in Table I is 10- and 20-fold greater than the concentration of PS in the PL compositions of entries 10 and 11 of Table I. The disclosure of synthetic PS meets the purity limitation of instant claim 6. The disclosure of an activator, tissue factor, and calcium ions satisfies the limitations of instant claims 7, 19 and 20.

The disclosure by Brown also meets the limitations of instant claims 8-14 which further limit claim 1 by reciting that the first and second coagulation time reagents comprises a first, second, third and fourth preparatory reagents. The claims further recites the limitations related to the various reagents and their concentrations that make up the preparatory reagents. *The claims do not recite that the preparatory reagents are part of the claimed kit.* Therefore, these claims are interpreted as product by process claims because they recite the reagents that are used to make the first and second coagulation time reagents which are actually claimed as part of the kit. The patentability of a product does not depend on how it is made. Claims 8-14 are drawn to the various reagents and their concentrations that are used to produce the first and second coagulation time reagents. These limitations do not detract from the fact that Brown teaches the claimed first and second coagulation time reagents. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

The disclosure by Brown falls within the scope of a kit as recited by the instant claims. According to Webster's Dictionary, a kit may be defined as: 1. a set of articles used for a particular purpose, 2. a set of parts or materials to be assembled, 3. a packaged set of related materials, or 4. a container for a kit (p. 667). Brown discloses the preparation of different liposomes having the claimed PS concentrations. Thus, the liposomes comprises a set of articles brought together for the purpose of testing APPT coagulation times. This disclosure meets the definition of a kit.

The disclosure by Webster's Dictionary is a supporting reference and properly used in a rejection under of U.S.C. 102 since it describes the definition of a kit. MPEP 2131.01.

Claims 1-6 and 8-13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Smirnov et al. (1999; "Smirnov") in light of Webster's Dictionary.

Smirnov discloses phospholipid vesicle having varying concentrations of PS for determining the optimal concentration of PL for prothrombin activation and factor Va inactivation. Liposomes containing PC, PE and varying percentages of PS were prepared. The legend of Figure 1 discloses that the concentration of PS was 1, 3, 5, 7, 10, 15 and 20% of the total PL (PS, PE and PC which corresponds to the darkened symbols). The total phospholipid concentration ranged from 0.1, 0.6, 3, 10 and 100 μg/mL. Thus, a liposome having a total PL concentration of 100 μg/mL, of which 3% is PS, has a PS concentration of 3 μg/mL. This concentration meets the claimed concentration of the second coagulation time reagent recited in instant claims 2 and 5. A liposome having a total PL concentration of 100 μg/mL, of which 20% is PS, has a PS concentration of 20 μg/mL, which meets the concentration limitation of the first coagulation time reagent recited in instant claims 2 and 5. A liposome having a total PL concentration of 100 μg/mL, of which 1% is PS, has a PS concentration of 1 μg/mL. The ration of a liposome having a PS concentration of 20 μg/mL to one having a PS concentration of 1 μg/mL, falls within the claimed range of 10 to 20 times, as recited in instant claims 3 and 4.

The disclosure by Smirnov also meets the limitations of instant claims 8-13 which further limit claim 1 by reciting that the first and second coagulation time reagents comprises a first, second, third and fourth preparatory reagents. The claims further recites the limitations related to the various reagents and their concentrations that make up the preparatory reagents. *The claims do not recite that the preparatory reagents are part of the claimed kit.* Therefore, these claims are interpreted as product by process claims because they recite the reagents that are used to make the first and second coagulation time reagents which are actually claimed as part of the kit. The patentability of a product does not depend on how it is

made. Claims 8-13 are drawn to the various reagents and their concentrations that are used to produce the first and second coagulation time reagents. These limitations do not detract from the fact that Brown teaches the claimed first and second coagulation time reagents. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

The disclosure by Smirnov falls within the scope of a kit as recited by the instant claims. According to Webster's Dictionary, a kit may be defined as: 1. a set of articles used for a particular purpose, 2. a set of parts or materials to be assembled, 3. a packaged set of related materials, or 4. a container for a kit (p. 667). Smirnov discloses the preparation of different liposomes having the claimed PS concentrations. Thus, the liposomes comprises a set of articles brought together for the purpose of testing coagulation times. This disclosure meets the definition of a kit.

The disclosure by Webster's Dictionary is a supporting reference and properly used in a rejection under of U.S.C. 102 since it describes the definition of a kit. MPEP 2131.01.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 4, and 6-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (US 5,314,695) and Webster's Dictionary in light of Rosen et al. (US 6,395,501; "Rosen").

The disclosure of Brown is discussed *supra.*

Brown does not disclose that the coagulant activator can be Russell's venom, ellagic acid, kaolin or sellatie.

Rosen discloses that phospholipids in combination with Russell's venom, ellagic acid, kaolin or silica derivatives are well known activators of the coagulation pathway and are suitable for measuring anticoagulant activity.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute Russell's venom, ellagic acid, kaolin or silica derivatives for tissue factor in the phospholipid compostion taught by Brown. The ordinary artisan would have been motivate dot do so because the various reagents are all recognized as activators of the coagulation pathway and have been used with phospholipids to measure anticoagulant activity. The ordinary artisan would have had a reasonable expectation that he or she could employ Russell's venom, ellagic acid, kaolin or silica derivatives in place of tissue factor as activators because Russell's venom, ellagic acid, kaolin or silica derivatives have been shown to activate the coagulant pathway for the purpose of measuring anticoagulant activity.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 7, 16, 18 and 19 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 6, 7, 8 and 9 of copending Application No. 11/050,766. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of '766 are drawn to the same reagents in overlapping concentrations as the claims of the instant application. Instant claim 1 is drawn to a kit comprising a first coagulation reagent and a second coagulation reagent wherein both reagents have phosphatidylserine (PS) but in different concentrations. Claim 1 of '766 is drawn to a kit having first and second reagents wherein the concentration of PS in the first reagent is 40 to 280 μM and the second is 1 to 30 μM. The range recited by '766 is a specie that anticipates the genus of instant claim 1. Instant claims 7, 16, 18 and 19 which depend from instant claim 1 recite the limitations wherein the reagent kit further comprises: an activator and calcium ion viper venom and calcium ions (claim 7), viper venom and calcium (claim 16), the type of venom (claim 18) and tissue factor and calcium ions (claim 19).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Hanley whose telephone number is 571-272-2508. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Susan Hanley
Patent Examiner
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